

CLAIMS

1. A wireless communication system comprising:
a network;
a first base station coupled to the network; and
a mobile station coupled to the base station via a wireless communication link;
wherein the network is configured to direct the mobile station to enter or leave
soft handoff status; and
wherein the mobile station is configured to modify a set of transmission
parameters in response to the network directing the mobile station to
enter or leave soft handoff.
2. A wireless communication system as recited in claim 1, wherein the
transmission parameter comprises a frame size, wherein if the mobile station is directed
to enter soft handoff, the frame size is set to a first size and wherein if the mobile station
is directed to leave soft handoff, the frame size is set to a second size.
3. A wireless communication system as recited in claim 2, wherein the first size is
greater than the second size.
4. A wireless communication system as recited in claim 3, wherein the first size is
10 ms and the second size is 2 ms.
5. A wireless communication system as recited in claim 1, wherein the mobile
station is configured to measure a pilot signal strength for each of one or more base
stations, wherein the one or more base stations include the first base station, and to
periodically transmit one or more pilot strength measurement messages to the network.
6. A wireless communication system as recited in claim 5, wherein the network is
configured to identify a change in a number of base stations in an active set for the
mobile station based on the pilot strength measurement messages and to direct the

mobile station to enter or leave soft handoff based on the change in the number of base stations in the active set.

7. A wireless communication system as recited in claim 6, wherein the network is configured to direct the mobile station to enter or leave soft handoff by sending a handoff direction message (HDM) to the mobile station.

8. A wireless communication system as recited in claim 7, wherein the mobile station is configured to modify the transmission parameter in response to receiving the HDM from the network.

9. A wireless communication system as recited in claim 8, wherein the mobile station is configured to transmit a handoff completion message to the network after receiving the HDM.

10. A mobile station configured to operate in a wireless communication system comprising:

a processing subsystem; and

a transceiver subsystem;

wherein the processing subsystem is configured to set a transmission parameter for the transceiver subsystem in response to detecting that the mobile station is entering or leaving soft handoff.

11. A mobile station as recited in claim 10, wherein the processing subsystem is configured to detect that the mobile station is entering or leaving soft handoff based upon a received handoff direction message (HDM).

12. A mobile station as recited in claim 11, wherein the processing subsystem is configured to set the transmission parameter to a first value if the HDM directs the mobile station to enter soft handoff, and to set the transmission parameter to a second value if the HDM directs the mobile station to leave soft handoff.

13. A mobile station as recited in claim 12, wherein the transmission parameter comprises frame size.
14. A mobile station as recited in claim 13, wherein the first size is greater than the second size.
15. A mobile station as recited in claim 14, wherein the first size is 10 ms and the second size is 2 ms.
16. A mobile station as recited in claim 11, further comprising measuring a pilot signal strength for each of one or more base stations and periodically transmitting one or more pilot strength measurement messages to a network connected to the base stations.
17. A mobile station as recited in claim 16, further comprising transmitting a handoff completion message to the network after receiving the HDM.
18. A method implemented in a wireless communication system comprising:
 - detecting a mobile station entering or leaving soft handoff; and
 - modifying a transmission parameter for the mobile station in response to detecting the mobile station entering or leaving soft handoff.
19. A method as recited in claim 18, wherein the transmission parameter comprises a frame size, wherein if the mobile station is detected entering soft handoff, the frame size is set to a first size and wherein if the mobile station is detected leaving soft handoff, the frame size is set to a second size.
20. A method as recited in claim 19, wherein the first size is greater than the second size.
21. A method as recited in claim 20, wherein the first size is 10 ms and the second size is 2 ms.

22. A method as recited in claim 18, further comprising the mobile station measuring a pilot signal strength for each of one or more base stations and periodically transmitting one or more pilot strength measurement messages to a network.
23. A method as recited in claim 22, wherein detecting the mobile station entering or leaving soft handoff comprises identifying a change in a number of base stations in an active set for the mobile station based on the pilot strength measurement messages.
24. A method as recited in claim 23, further comprising sending a handoff direction message (HDM) from the network to the mobile station in response to detecting the change in a number of base stations in an active set.
25. A method as recited in claim 24, wherein modifying the transmission parameter for the mobile station is performed in response to receiving the HDM from the network.
26. A method as recited in claim 25, further comprising transmitting a handoff completion message from the mobile station to the network after receiving the HDM.
27. A method implemented in a mobile station comprising:
detecting that the mobile station is entering or leaving soft handoff;
if the mobile station is entering soft handoff, setting a transmission parameter to a first value; and
if the mobile station is leaving soft handoff, setting a transmission parameter to a second value.
28. A method as recited in claim 27, wherein detecting that the mobile station is entering or leaving soft handoff comprises receiving a handoff direction message (HDM) from the network.
29. A method as recited in claim 27, further comprising measuring a pilot signal strength for each of one or more base stations and periodically transmitting one or more pilot strength measurement messages to a first one of the base stations.

30. A method as recited in claim 29, further comprising transmitting a handoff completion message to the first one of the base stations after receiving the HDM.
31. A method as recited in claim 27, wherein the transmission parameter comprises frame size.
32. A method as recited in claim 31, wherein the first value is greater than the second value.
33. A method as recited in claim 32, wherein the first value is 10 ms and the second value is 2 ms.